Chunhui Liu

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Education

- **Carnegie Mellon University** — Pittsburgh, PA, U.S.A
  Master of Science in Computer Vision — *Aug. 2018 - present*
- **Peking University** — Beijing, R.P.China
  Bachelor of Science in Computer Science, Summa Cum Laude — *Sep. 2014 - Jun. 2018*
  - Department GPA: 3.59/4.0 , Cumulative GPA: 3.54/4.0
  - Outstanding Graduate Award of Beijing

Experience

- **Research Assistant** — Institute of Computer Science and Technology, Peking University
  Advisor: Jiaying Liu, Associate Professor, Peking University — *Feb. 2016 - Jul. 2018*

  (1) Online Action Detection and Forecast on 3D Skeleton Data
  - Proposed first online algorithm to detect action interval and precisely forecast action occurrence synchronously on skeleton data.
  - **Publication**: Online Action Detection and Forecast via Multi-Task Deep Recurrent Neural Network
    Chunhui Liu, Yanghao Li, Yueyu Hu, Jiaying Liu — In Proceeding of ICASSP 2017.
  - **Pattern**: A Multi-Task Deep RNN Model for Online Action Detection and Forecast.
    Chunhui Liu, Yanghao Li, Yueyu Hu, Jiaying Liu, Zongming Guo — No. 201710146933.5, China.

  (2) Large Scale Action Recognition on 3D Skeleton Data
  - Proposed a Temporal Perceptive Network with short-term kernel to capture detailed action feature in skeleton data.
  - Ranked #1 in *ACCV Large Scale 3D Human Activity Analysis Challenge in Depth Videos*
  - **Publication**: Temporal Perceptive Network for Skeleton-Based Action Recognition
    Yueyu Hu, Chunhui Liu, Yanghao Li, Sijie Song and Jiaying Liu — In Proceeding of BMVC 2017.

  (3) Large Scale 3D Action Benchmark and Workshops
  - Built Largest multi-modal action dataset for 3D action understanding.
  - Used for *IEEE International Conference on Multimedia and Expo - Large Scale 3D Human Activity Analysis Challenge in Depth Videos* (ICME2017 Workshop).
  - **Publication**: PKU-MMD: A Large Scale Benchmark for Skeleton-Based Human Action Understanding
    Chunhui Liu, Yueyu Hu, Yanghao Li, Sijie Song, Jiaying Liu — In Proceeding of ACM VSCC 2017.

- **Research Assistant** — Robotics Institute, Carnegie Mellon University
  Advisor: Deva Ramanan, Associate Professor, Carnegie Mellon University — *Jun. 2017 - Sep. 2017*

  (1) Visualizing and Interpreting Convolutional Neural Networks
  - Proposed a pixel-wise non-parametric method to interpret Generative Adversarial Networks, by synthesizing similar results using interior features.
  - **Publication**: Patch Correspondences for Interpreting Pixel-level CNNs
    Victor Fragoso, Chunhui Liu, Aayush Bansal, Deva Ramanan — Arxiv Preprint 1711.10683.

Skills

Deep Learning Architecture	TensorFlow, Keras, *Theano*
Programming Language	C/C++, Python, HTML, JavaScript, Racket (Lisp), Latex
Projects	Android Operating System, Online Collaboration System, MiniJava Compiler

Honors and Awards

Third Prize in Peking University ACM Competition	2017, 2016, 2015
Meritorious Prize, the Mathematical Contest in Modeling (MCM)	2016
Bronze Prize in 30_{th} National Olympiad in Informatics in China	2013